American Rivers
Thriving By Nature

September 30, 2011

Phillip Isenberg, Chairman
Delta Stewardship Council
980 9th Street, Suite 1500
Sacramento, CA 95814

Dear Chair Isenberg, Council, and Staff,

Thank you for the opportunity to comment on the Delta Plan. We are disappointed that Draft 5 does little to actually reduce future flood risk in the Delta. The Council is missing an historic opportunity to take actions now that will minimize or prevent the devastating loss of life and property that will occur when, not if, a catastrophic flood pours down upon the Delta.

Chapter 7 correctly identifies factors that significantly *increase* risk in the Delta, but Plan policies neglect at least four of them— (page 162):

- Continued development within floodplains
- Inadequate channel capacities
- Climate change
- Sea level rise

Policies in Draft 5 leave people in harm's way (and below sea level), offer no direction for designating floodways or expanding conveyance capacity, and, by deferring the responsibility of climate change and sea level rise adaptation to other agencies, the Delta Plan leaves Delta residents vulnerable to catastrophic flooding without their knowledge. Further, it leaves California's taxpayers liable for billions in potential damage and repair costs.

We strongly urge you to revisit our previous comments with respect to public safety, proper disclosure of flood risk, expanding conveyance capacity to reduce flood hazards, and reducing residual risks behind levees. We have offered specific language and solutions to many problem statements in the plan that you did not address yourselves. These include: a modification to complement Table 7-1 that would account for depth of inundation upon levee failure; strategies for reducing risk on land behind levees; and a number of specific bypass opportunities--a list of areas to expand floodways to convey the 200-year flood while achieving the co-equal goals.

Sincerely,

John Cain
Conservation Director, California Flood Management

Comments to Draft 5 of Delta Plan

American Rivers offers the following new policy recommendations and proposals for chapters 3, 4, and 7. We have previously offered extensive comments and recommendations on chapter 7, most of which have not yet been incorporated into the current draft.

- March 10, 2011
- April 6, 2011
- May 27, 2011
- June 24, 2011

We hereby incorporate all our previous comments by reference and request that you review and include them in the next draft of the Delta Plan

Chapter 3. Governance: Implementation of the Delta Plan

The draft does not address how the Council will assure that a consistency certification or appeal pursuant to Water Code section 85225 is coordinated with related regulatory proceedings before public agencies which have primary or concurrent jurisdiction over the covered action under other laws. We propose the following policy:

> *G P2. A certification of consistency must (i) identify all other permits or other regulatory authorizations necessary for the implementation of the covered action and (ii) disclose the terms of each such authorization which has been secured, and otherwise, the status and schedule of each such proceeding. The proponent of the covered action must propose appropriate procedures for coordination between the Delta Stewardship Council and other public agencies which have jurisdiction over the covered action. The Council will determine appropriate procedures to facilitate the expeditious resolution of issues subject to multiple jurisdictions, during the consistency review and any appeal thereof.*

Chapter 4. A More Reliable Water Supply for California

Draft Policy WR P1 provides that the export, transfer, or use of water in the Delta is inconsistent with the Delta Plan if it meets two conditions: it causes adverse impacts on the co-equal goals, and a water supplier whose demand is a significant cause of the action has not complied with certain planning requirements arising largely from S.B. 7 (2009). The draft does not address similar requirements arising from other state and federal laws, is unnecessarily complex, and is unclear whether an action which benefits multiple suppliers is inconsistent as a whole if any one supplier has not met the planning requirements. We propose the following substitute for completeness, simplicity, and fairness.

> *WR P1. A covered action to export water from, transfer water through, or use water in the Delta is inconsistent with the Delta Plan to the extent: (1) the covered action*

adversely affects the attainment of the coequal goals as defined in Water Code section 85054; and (2) a water supplier that receives water as a result of that action has not timely complied with applicable requirements for reducing demand or enhancing supply reliability as established by Water Code Division 6, Part 2.55 and other statutes and implementing rules. The consistency certification required by Water Code section 85225 and Delta Plan Policy GP1 will, for each such supplier, identify all such applicable requirements and demonstrate the supplier's timely compliance.

Chapter 7. Reduce Risk to People, Property, and State Interests in the Delta

Regarding policy RR P4 and recommendations for flood management investment: The draft policy is limited to priorities for state funding. While useful, it does not address the reality that the State and the U.S. do not own most of the Delta levees and do not have the funding capacity for the modification, operation, and maintenance of all such levees. We propose the following policy:

RR P5. By December 31, 2015, any entity which has individual or shared legal responsibility to maintain a levee providing flood protection in the Delta will develop and, after appropriate public hearing and comment, adopt a plan demonstrating that it has or may reasonably expect funding adequate for modification, operation, and maintenance of the levee to comply with applicable requirements for public safety until 2035.

Proposed Policies for Protecting Lives and Public Property

We offer the following new policy recommendations to protect lives and public property by ensuring that the state does not subsidize development of high risk floodplains and that any private development of high risk floodplains is properly regulated to reduce the consequences of flooding.

RR PX. A covered action involving development or construction of public buildings or publically funded buildings, including tax breaks, on lands behind 200-year levees and/or below sea-level shall not be funded by state or local agencies.

RR PX. Construction of new schools shall not be permitted behind 200-year levees or below sea level.

RR PX. State investment will be made available for upgrading levees to an urban level of protection provided all residential and commercial construction and upgrades are built consistent with FEMA Technical Bulletin 2, "Flood Damage Resistant Design and Building Materials."

RR RX. All privately financed residential and commercial construction on lands below sea-level should be built consistent with FEMA Technical Bulletin 2, "Flood Damage Resistant Design and Building Materials"[1]

Comments and Proposed Policies for expanding conveyance capacity

Draft 5 of the plan does not provide any policy to facilitate the expansion of flood conveyance into and through the Delta. Apparently the Council may be reluctant to designate new floodways without more deliberate input from local or state agencies. Failure to regulate development in potential floodways, however, could preclude future expansion and thereby increase future risk to life and property in the Delta. Below, we provide some policy recommendations that would allow the Council to protect conveyance expansion opportunities today while creating an incentive for local and state agencies to develop specific and timely plans for expanding conveyance in the future.

RR PX. The following areas have been identified as floodway and bypass expansion zones that will assist in conveying the 200-year flood and will meet the co-equal goals. (see American Rivers comments May 27, 2011, page 3 for geographic description).

Building shall not occur in these areas until the Central Valley Flood Management Plan, the Delta Stewardship Council, or local communities develop a coordinated approach for conveying the 200-year flood consistent with co-equal goals of the Delta Plan (restore ecosystem and maintain a reliable water supply). Only after the geographically-specific approach is identified and projects are delineated will the size of this footprint shrink.

RR PX . If the Central Valley Flood Protection Plan does not designate new floodways in the regions listed above, expand bypasses, or provide a geographically specific plan for expanding conveyance in the Delta, the Delta Stewardship Council shall work with communities and stakeholders to designate areas for expanding flood conveyance capacity and to identify projects that would provide system-wide flood risk reduction benefits consistent with the co-equal goals.

Comments Proposed Policy on deferring the responsibility of setting sea level rise thresholds and standards with levee design for Urban Levels of Protection:

Draft 5 of the Delta Plan would permit all urban development behind 200-year Urban Levees.[2] According to the Delta Plan, the Urban Levee design standards and waters surface elevations must comply with criteria set forth in the "Interim Levee Design Criteria for Urban and Urbanizing Areas in the Sacramento-San Joaquin Valley" (ILDC)[3].

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[1] http://www.fema.gov/library/viewRecord.do?action=back&id=1580
[2] Table 7-1 (page 175 Delta Plan Draft 5).
[3] Delta Plan Draft 5 Page 175. footnote "i"

According to the ILDC, the required height of urban levees depends on and must be three feet higher than the design water surface elevation for the 200-year event.[4] Currently the ILDC advises "*to consider a range of estimates and prepare for future expansion and structural raises to address long-term sea level rise"* in estimating the 200-year water surface elevation,[5] but does not require or specify how sea level rise should be considered.

Criteria addressing sea level rise are considered, "Criteria under development." The ILDC recommends looking at the Delta Risk Management Strategy to estimate sea level rise in the Delta[6], and recommends reviewing a Corps of Engineers technical planning document for guidance.

Neither the Delta Risk Management Strategy nor the Corps documents define sea level rise[7] [8]. The Delta Risk Management Strategy offers a broad 0.66-4.59 foot range by 2100 that could be used to estimate sea level rise. The Corps document suggests looking at example curves or additional studies (Such as a 1987 NRC report or an IPCC report) that could be used to get a sea-level rise estimates when thinking about risk, planning, and construction.

As a result, there is currently no specific measurable requirement for the height of the top of urban levees in the Delta or for water surface elevations in the Delta during a 200-year flood that considers sea-level rise.

If the Delta Plan ultimately permits risky development below sea level, at the very least the Delta Plan should define and implement strict levee design criteria and water surface elevation criteria that account for 40-55 inches of projected sea level rise[9] by 2100. Council should not defer responsibility to another agency or initiative only for that initiative to defer responsibility to another.

Having no standard defined would make a consistency determination quite difficult, if not impossible, and future residents could be left extremely vulnerable.

Problem. Urban Levee design criteria do not specifically account for sea level rise, the consequences of which could be catastrophic considering urban development is permitted on lands below sea-level.

> *RR PX. Covered actions behind 200-year levees in the Delta will be consistent with the Delta Plan only if the height of the top of a levee or floodwall and the design water surface elevation in the area accounts for 55 inches of sea-level rise by 2100 .*

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[4] Interim Levee Design Criteria for Urban and Urbanizing Areas in the Sacramento-San Joaquin Valley" Version 4, December 15, 2010. *Section 6.1*

[5] Ibid. *Section 7.7 page 44, paragraph 1*

[6] Ibid. *Section 7.7 page 44*

[7] Delta Risk Management Strategy (2008). Section 14, *p 14-20,* Table 14-4

[8] EC 1165-2-211 (July 1, 2009) *page :* http://www.dbw.ca.gov/csmw/pdf/EC_Sea_Level_Change.pdf

[9] Table 1-2 on page 25 of Delta Plan adopts a 55 inch sea level rise projection by 2100.

RR RX. Department of Water Resources must amend the Interim Levee Design Criteria for Urban and Urbanizing Areas (ILDC) to explicitly account for sea level rise in the Delta when defining 200-year design water surface elevations (Section 7.0 of ILDC) by adding between 40 and 55 inches to water surface elevations in model results.

Proposed Changes to Table 7-1 regarding acceptable levels of development behind various types of levees:

Attached, we offer a revised version of table 7.1 to better protect people and communities from catastrophic losses on deep floodplains. The existing version of table would allow development below sea level and other deep floodplains and will eventually result in catastrophic flood losses. Our revised version of table 7.1 limits and regulates development of deep flood plains to protect public safety.

Conclusion

Please contact John Cain at (510) 388-8930 jcain@americanrivers.org or Richard Roos-Collins at (510) 296-5589 rrcollins@waterpowerlaw.com on legal issues.

The "**All development in urban areas"** classification in Table 7-1 should be modified to include the divisions in Table 7-2 below in order to protect public safety and economic sustainability in the Delta.

Table 7-2: Modifications to Table 7-1 that recognize inundation depth

Covered Actions	**Basis for the Minimum Levee Design Classifications**				
	Class 1	**Class 2**	**Class 3**	**Class 4**	**Class 5**
Development of subdivisions of more than four parcels in non-urbanized areas not within Legacy towns	Not acceptable	Not acceptable	Not acceptable	Not acceptable	Not acceptable
Construction of schools or critical facilities on land below sea-level[1]	Not acceptable	Not acceptable	Not acceptable	Not acceptable	Not acceptable
Development in urban areas where depth of inundation is less than 3 feet	Not acceptable	Not acceptable	Not acceptable	Not acceptable	Acceptable
Development in urban areas where depth of inundation is between 3-6 feet	Not acceptable	Not acceptable	Not acceptable	Not acceptable	Acceptable where "floodproofing" and building code updates have been adopted[2,3] (elevating above 3 feet)
Development in urban areas where depth of inundation is greater than 6 feet	Not acceptable	Not acceptable	Not acceptable	Not acceptable	Acceptable only for residential + commercial uses on second floor or above

1. Sea-level defined as the elevation of mean high tide. These areas will not drain out, making them prone to catastrophic damages. Considering sea level rise projections of 40-55 inches (page 1 Delta Plan Draft 4), these areas will be at even greater risk in the future.
2. SB 5 required building codes standards updates in "areas protected by Central Valley Flood Protection Plan facilities where flood levels for the 200-year flood are anticipated to exceed three feet."
3. Most flood deaths (74%) during Hurricane Katrina occurred in single story residential structures elevated 3 feet or less. (Boyd, Ezra. 2011. "Fatalities due to Hurricane Katrina's Impacts in Louisiana." Available: http://etd.lsu.edu/docs/available/etd-06092011-084046/